

DETAILED ACTION

This Office Action is in response to the amendment filed 6/23/08. Currently, claims 1-15 are pending in this application.

Please note this Office Action is made Non-final because in the drawing provided by the Examiner in the previous office action, the arrows were pointing to the wrong location and from the response it appears as though the Applicant misread the rejection as a result of the error.

Specification

1. The disclosure is objected to because of the following informalities: The features "130X, 140X, 150X, 160X, 130Y, 140Y, 150Y and 160Y (as shown in the replacement figures 3 and 4) are not described in the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in

such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- Claim 10 recites "... the large anterior face has an overall parallelogram shape". Further review of the figures do not show a parallelogram shape. Applicant stated in the previous response (6/23/08, page 11) that "Specifically reference lines drawn from the ends of edge pairs, for example 13a and 13b in figure 2, form a parallelogram". Thus, Examiner believes that the shape itself is not "an overall parallelogram" but rather an imaginary line going from one point to another point forms the "overall parallelogram" shape.

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3. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 10 recites "... the large anterior face has an overall parallelogram shape". Further review of the figures do not show a parallelogram shape. Applicant stated in the previous response (6/23/08, page 11) that "Specifically reference lines drawn from the ends of edge pairs, for example 13a and 13b in figure 2, form a parallelogram". Thus, Examiner believes that the shape itself is not "an overall parallelogram" but rather an imaginary line going from one point to another point forms the "overall parallelogram" shape.
- Claim 9 recites "... the anterior layer portion is delimited by two overlapping truncated pyramids having different tapers. Further review of the Specification and figures do not clarify the claimed subject matter. It is not clear to the examiner what parts are considered to be "two overlapping truncated pyramids" and which portions is the Applicant considering to be "different tapers".
- Claim 12 (lines 6-8) recites "a_first specific_number" and "a second specific number". It is not clear what the claimed subject matter is.
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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

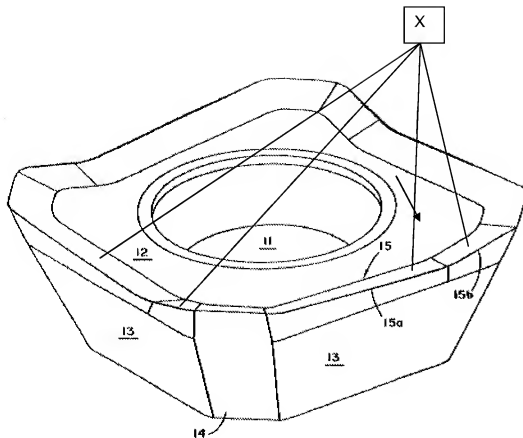
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 5, 7-10, 12, 13 and 15, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Satran et al. (EP 0548752 A1).

Regarding claims 1 and 2, SATRAN ET AL teaches an indexable cutting insert comprising an anterior layer cutting head portion (i.e. top portion) comprising mutually inclined lateral faces (X: see figure below) of an anterior periphery and delimiting together with a large anterior face (12), a front view profile formed by a certain number of cutting edges (15a, 15b) mutually inclined in the direction (see arrow below and also figure 6) of said profile, and a posterior layer portion (i.e. bottom portion), constituting an anchoring base on a tool holder, comprising planar lateral faces (13) of a posterior periphery, at least some of which are framing supporting faces on walls of a seat of the tool holder (16), characterized in that the posterior periphery (13) comprises a smaller number of lateral framing supporting faces than the number of cutting edges (i.e. there are four posterior lateral faces (13) while there are eight cutting edges (15a & 15b for each side) ('752, figure 1). Regarding claims 7 and 8, SATRAN ET AL teaches the lateral framing supporting faces of the insert having an overall truncated pyramid shape

('752, figure 1 and also as evidenced by USP 5,951,214, col. 1, lines 30-32). Regarding claims 5 and 9, as best understood, SATRAN ET AL teaches in figure 5, said successive lateral framing supporting faces being joined together forming an angle of less than 180 degrees between them and defining periphery having a uniformly varying orientation (i.e. formed by the "v shaped" of each face with different tapers) ('752, figure 5). Regarding claim 10, SATRAN ET AL teaches in figure 2, the insert having an overall parallelogram shape. Regarding claims 12, 13 and 15, SATRAN ET AL teaches said cutting insert being held in a tool holder for a whereby the tool holder comprises a seat including a bottom, associated with insert clamping means (not shown but it is well known in the art to clamp the insert with a screw going through it's central through hole), and lateral walls for receiving posterior framing support sides (13) of the insert and the walls of the seat are flared (i.e. the sides that contact the support faces of the insert) in relation to the bottom thus forming, together with the bottom seat surface, an angle slightly exceeding 90 degrees, because the insert has a truncated pyramid shape ('752, figure 2).



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 6, 11 and 14, as best understood, are rejected under 35

U.S.C. 103(a) as being unpatentable over Satran et al. (EP 0548752 A1).

Regarding claims 3,4 and 6, SATRAN ET AL teaches the claimed invention (i.e. lateral faces (13) of a posterior periphery, at least some of which are framing supporting faces on walls of a seat of the tool holder (16)) except for the lateral faces being curved/concave or having varying curvature. It would have been an obvious matter of design choice to make the different portions of the lateral faces of whatever form or shape was desired or expedient depending on the application as long as the toolholder has complementary shape. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results.

Regarding claims 11 and 14, SATRAN ET AL teaches the claimed invention (i.e. insert being held in a toolholder such that the lateral faces are contacted by the walls of the toolholder) except for the lateral faces and the walls being inclined at an angle of 65-85 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose an inclination for the lateral face of the insert and a complementary angle of the walls of the toolholder that mates with the lateral faces depending on the machining operation, type of insert as well as size, because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Response to Arguments

Applicant's arguments filed 6/23/08 have been fully considered but they are not persuasive.

Please note this Office Action is made Non-final because in the drawing provided by the Examiner in the previous office action, the arrows were pointing to the wrong location and from the response it appears as though the Applicant misread the rejection as a result of the error.

In response to Applicants argument (page 14) that "The Examiner has identified in Satran et al. a large anterior face (12) and mutually inclined lateral faces (X) as shown in the included figure. Applicant respectfully disagrees with the characterization of the items marked as X in the included figure as the mutually inclined lateral faces required by claim 1 of the present application. The areas marked X by the Examiner in Satran et al. are best characterized as anterior periphery areas that delimit the anterior face 12. Each area X is part of the large anterior face 12, and are not mutually inclined lateral faces. Consequently, required elements of claim 1, the mutually inclined lateral faces, are not described by Satran et al. and the rejection must be reversed", Examiner respectfully directs Applicant to the corrected drawing above. Please note that in the drawing provided by the Examiner in the previous office action, the arrows were pointing to the wrong location and from the response it appears as though the Applicant misread the rejection as a result of the error.

In response to Applicants argument (page 14) that "Satran et al. does not teach mutually inclined cutting edges (example cutting edges are labeled 15a and 15b in Satran et al.) in the direction of the front view profile. Because figure 1 of Satran et al. is a perspective view, 15b is not seen as being in line with edge 15a since edge 15b is a

ramp (Satran et al. col. 5, line 29) when viewed from a non-frontal direction" The front profile of the cutting insert of Satran et al. is seen in figure 2, and it is shown that edges 15a and 15b are on the same line (the angle between 15a and 15b is 180°). Thus, features 15a and 15b of the reference are not mutually inclined as required by the present application", Examiner respectfully disagrees. Please refer to the view from the arrow in the figure above as well as Satran's figure 6, which shows the cutting edges (15a,15b) converge towards each other.

In response to Applicants argument (page 14) that "...the front profile of Satran et al. exhibits only four straight lines with cutting edges and the requirement of claim 1 that the number of cutting edges is greater than the number of lateral faces is not met", Examiner respectfully disagrees. As mentioned above, looking at Satran's figure 6, the cutting edges (15a,15b) converge towards each other therefore per side, there is a first cutting edge (15a) and a second cutting edge (15b), thus a total of eight cutting edge.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sara Addisu/
Examiner, Art Unit 3724
10/24/08